

CLAIMS

1. A beverage composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) from about 10 to about 20 mEq/L of chloride;
- (d) at least about 8 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

2. The beverage of claim 1 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

3. The beverage of claim 1 wherein said carbohydrate source is a mixture of a minimum of three of the following types of carbohydrates: sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate with the amount of fructose, if selected, always less than the total amount of glucose from all sources.

4. The beverage of claim 1 wherein said sodium comprises from about 30 to about 100 mEq/L.

5. The beverage of claim 1 wherein said sodium comprises from about 30 to about 60 mEq/L.

6. The beverage of claim 1 wherein said sodium comprises from about 33 to about 40 mEq/L.

7. The beverage of claim 4 wherein said sodium comprises from about 10 to about 50 mEq/L of sodium chloride and from about 10 to about 50 mEq/L of sodium citrate.

8. The beverage of claim 5 wherein said sodium comprises from about 10 to about 30 mEq/L of sodium chloride and from about 10 to about 30 mEq/L of sodium citrate.

9. The beverage of claim 1 wherein said chloride comprises from about 11 to about 18 mEq/L.

10. The beverage of claim 1 wherein said potassium comprises from about 8 to about 20 mEq/L.

11. The beverage of claim 1 further comprising calcium from about 1 to about 6 mEq/L.

12. The beverage of claim 1 further comprising magnesium from about 1 to about 6 mEq/L.

13. The beverage of claim 1 further comprising a flavoring from about 0 to about 0.4% by weight.

14. The beverage of claim 1 further comprising a clouding agent from about 0 to about 100 parts per million.

15. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

- (d) at least about 8 mEq/L of potassium;
- (e) from about 1 to about 6 mEq/L of calcium;
- (f) from about 1 to about 6 mEq/L of magnesium;
- (g) from about 0 to about 0.4% by weight of a flavoring agent;
- (h) from about 0 to about 100 parts per million of a clouding agent; and
- (i) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

16. The beverage of claim 15 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

17. The beverage of claim 15 wherein said sodium comprises from about 30 to about 100 mEq/L.

18. The beverage of claim 15 wherein said sodium comprises from about 30 to about 60 mEq/L.

19. The beverage of claim 15 wherein said sodium comprises from about 33 to about 40 mEq/L.

20. The beverage of claim 17 wherein said sodium comprises from about 10 to about 50 mEq/L of sodium chloride and from about 10 to about 50 mEq/L of sodium citrate.

21. The beverage of claim 18 wherein said sodium comprises from about 10 to about 30 mEq/L of sodium chloride and from about 10 to about 30 mEq/L of sodium citrate.

22. The beverage of claim 15 wherein said chloride comprises from about 11 to about 18 mEq/L.

23. The beverage of claim 15 wherein said potassium comprises from about 8 to about 20 mEq/L.

24. The beverage of claim 15 wherein said calcium comprises from about 1 to about 3 mEq/L.

25. The beverage of claim 15 wherein said magnesium comprises from about 1 to about 3 mEq/L.

26. A beverage composition comprising:

(a) from about 4.5 to about 6.5% by weight of carbohydrates;

(b) at least about 30 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

(d) at least about 8 mEq/L of potassium;

(e) from about 1 to about 3 mEq/L of calcium;

(f) from about 1 to about 3 mEq/L of magnesium;

(g) from about 0 to about 0.2% by weight of a flavoring agent;

(h) from about 0 to about 50 parts per million of a clouding agent; and

(i) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

27. The beverage of claim 26 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

28. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 30 to about 40 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

(d) at least about 8 mEq/L of potassium;

(e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

29. The beverage of claim 28 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

30. The beverage of claim 28 wherein said sodium comprises from about 10 to about 20 mEq/L of sodium chloride and from about 10 to about 20 mEq/L of sodium citrate.

31. The beverage of claim 28 wherein said chloride comprises from about 11 to about 18 mEq/L.

32. The beverage of claim 28 wherein said potassium comprises from about 8 to about 20 mEq/L.

33. The beverage of claim 28 further comprising calcium from about 1 to about 6 mEq/L.

34. The beverage of claim 28 further comprising magnesium from about 1 to about 6 mEq/L.

35. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

(d) from about 8 to about 20 mEq/L of potassium; and

(e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

36. The beverage of claim 35 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

37. The beverage of claim 35 wherein said sodium comprises from about 30 to about 60 mEq/L.

38. The beverage of claim 35 wherein said sodium comprises from about 30 to about 40 mEq/L.

39. The beverage of claim 37 wherein said sodium comprises from about 10 to about 30 mEq/L of sodium chloride and from about 10 to about 30 mEq/L of sodium citrate.

40. The beverage of claim 38 wherein said sodium comprises from about 10 to about 20 mEq/L of sodium chloride and from about 10 to about 20 mEq/L of sodium citrate.

41. The beverage of claim 35 wherein said chloride comprises from about 11 to about 18 mEq/L.

42. The beverage of claim 35 wherein said potassium comprises from about 10 to about 19 mEq/L.

43. The beverage of claim 35 further comprising calcium from about 1 to about 6 mEq/L.

44. The beverage of claim 35 further comprising magnesium from about 1 to about 6 mEq/L.

45. A beverage composition comprising:

(a) from about 4.5 to about 6.5% by weight of carbohydrates;

(b) from about 30 to about 40 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

(d) from about 8 to about 20 mEq/L of potassium;

(e) from about 1 to about 3 mEq/L of calcium;

(f) from about 1 to about 3 mEq/L of magnesium;

(g) from about 0 to about 0.2% by weight of a flavoring agent;

(h) from about 0 to about 50 parts per million of a clouding agent; and

(i) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

46. The beverage of claim 45 further comprising citric acid.

47. The beverage of claim 46 having a pH of from about 2.5 to about 4.5.

48. The beverage of claim 47 wherein said beverage is isotonic.

49. The beverage of claim 45 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructooligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

50. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;

(c) at least about 8 mEq/L of potassium; and

(d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

51. The beverage of claim 50 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructooligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

52. The beverage of claim 50 further comprising from about 1 to about 6 mEq/L of calcium.

53. The beverage of claim 50 further comprising from about 1 to about 6 mEq/L of magnesium.

54. The beverage of claim 50 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

55. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment;

(c) at least about 8 mEq/L of potassium;

(d) from about 1 to about 6 mEq/L of calcium;

(e) from about 1 to about 6 mEq/L of magnesium;

(f) from about 0 to about 0.4% by weight of a flavoring agent;

(g) from about 0 to about 100 parts per million of a clouding agent; and

(h) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

56. The beverage of claim 55 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

57. The beverage of claim 55 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 42 to about 70 mEq/L.

58. The beverage of claim 55 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 46 to about 60 mEq/L.

59. The beverage of claim 57 wherein said potassium comprises from about 8 to about 20 mEq/L.

60. The beverage of claim 57 wherein said calcium comprises from about 1 to about 3 mEq/L.

61. The beverage of claim 57 wherein said magnesium comprises from about 1 to about 3 mEq/L.

62. A beverage composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment;

- (c) from about 8 to about 20 mEq/L of potassium;
- (d) from about 1 to about 6 mEq/L of calcium;
- (e) from about 1 to about 6 mEq/L of magnesium;
- (f) from about 0 to about 0.4% by weight of a flavoring agent;
- (g) from about 0 to about 100 parts per million of a clouding agent; and
- (h) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

63. The beverage of claim 62 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

64. The beverage of claim 62 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 42 to about 70 mEq/L.

65. The beverage of claim 62 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 46 to about 60 mEq/L.

66. The beverage of claim 62 wherein said potassium comprises from about 10 to about 19 mEq/L.

67. The beverage of claim 62 wherein said calcium comprises from about 1 to about 3 mEq/L.

68. The beverage of claim 62 wherein said magnesium comprises from about 1 to about 3 mEq/L.

69. A beverage composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

70. The beverage of claim 69 wherein said sodium comprises up to about 100 mEq/L.

71. The beverage of claim 69 wherein said sodium comprises up to about 60 mEq/L.

72. The beverage of claim 69 wherein said sodium comprises from about 33 to about 40 mEq/L.

73. The beverage of claim 69 wherein said chloride comprises from about 10 to about 50 mEq/L.

74. The beverage of claim 69 wherein said chloride comprises from about 11 to about 20 mEq/L.

75. The beverage of claim 69 wherein said potassium comprises from about 8 to about 16 mEq/L.

76. The beverage of claim 69 further comprising calcium from about 0.1 to about 6 mEq/L.

77. The beverage of claim 69 further comprising magnesium from about 0.1 to about 6 mEq/L.

78. A beverage composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium;
- (e) at least about 0.1 to about 6 mEq/L of magnesium;
- (f) at least about 0.1 to about 6 mEq/L of calcium;
- (g) from about 0 to about 0.4% by weight of a flavoring;
- (h) from about 0 to about 100 ppm of a clouding agent;
- (i) from about 0.24 to about 0.45% by weight of citric acid; and
- (j) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

79. The beverage of claim 78 wherein said sodium comprises up to about 100 mEq/L.

80. The beverage of claim 78 wherein said sodium comprises up to about 60 mEq/L.

81. The beverage of claim 78 wherein said sodium comprises from about 33 to about 40 mEq/L.

82. The beverage of claim 78 wherein said chloride comprises from about 10 to about 50 mEq/L.

83. The beverage of claim 78 wherein said chloride comprises from about 11 to about 20 mEq/L.

84. The beverage of claim 78 wherein said potassium comprises from about 8 to about 16 mEq/L.

85. A beverage composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 1.0 mEq/L of magnesium;
- (e) at least about 0.1 mEq/L of calcium; and
- (f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

86. The beverage of claim 85 wherein said sodium comprises from about 30 to about 100 mEq/L.

87. The beverage of claim 85 wherein said chloride comprises from about 10 to about 50 mEq/L.

88. The beverage of claim 85 wherein said magnesium comprises from about 1 to about 6 mEq/L.

89. The beverage of claim 85 wherein said calcium comprises from about 0.1 to about 6 mEq/L.

90. The beverage of claim 85 further comprising at least 7 mEq/L of potassium.

91. The beverage of claim 90 wherein said potassium comprises from about 7 to about 25 mEq/L.

92. The beverage of claim 91 further comprising:

(a) from about 0 to about 0.4% by weight of a flavoring;

(b) from about 0 to about 100 ppm of a clouding agent; and

(c) from about 0.24 to about 0.45% by weight citric acid.

93. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride; and

(d) at least about 8 mEq/L of potassium; wherein the osmolality of said fluid composition is in the range of from about 250 to about 350 mOsm/Kg.

94. The concentrate composition of claim 93 wherein said liquid is water.

95. The concentrate composition of claim 93 wherein said liquid is a sports beverage.

96. The concentrate composition of claim 93 wherein said liquid includes at least one electrolyte.

97. The concentrate composition of claim 93 wherein said liquid includes a carbohydrate.

98. The concentrate composition of claim 93 wherein said liquid includes at least one electrolyte and a carbohydrate.

99. The concentrate composition of claim 93 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

100. The concentrate composition of claim 93 wherein said carbohydrate source is a mixture of a minimum of three of the following types of carbohydrates: sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose, fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate with the amount of fructose, if selected, always less than the total amount of glucose from all sources.

101. The concentrate composition of claim 93 wherein said sodium comprises from about 30 to about 100 mEq/L.

102. The concentrate composition of claim 93 wherein said sodium comprises from about 30 to about 60 mEq/L.

103. The concentrate composition of claim 93 wherein said sodium comprises from about 33 to about 40 mEq/L.

104. The concentrate composition of claim 101 wherein said sodium comprises from about 10 to about 50 mEq/L of sodium chloride and from about 10 to about 50 mEq/L of sodium citrate.

105. The concentrate composition of claim 102 wherein said sodium comprises from about 10 to about 30 mEq/L of sodium chloride and from about 10 to about 30 mEq/L of sodium citrate.

106. The concentrate composition of claim 93 wherein said chloride comprises from about 11 to about 18 mEq/L.

107. The concentrate composition of claim 93 wherein said potassium comprises from about 8 to about 20 mEq/L.

108. The concentrate composition of claim 93 that, when constituted with a liquid, produces a fluid composition further comprising calcium from about 1 to about 6 mEq/L.

109. The concentrate composition of claim 93 that, when constituted with a liquid, produces a fluid composition further comprising magnesium from about 1 to about 6 mEq/L.

110. The concentrate composition of claim 93 that, when constituted with a liquid, produces a fluid composition

further comprising a flavoring from about 0 to about 0.4% by weight.

111. The concentrate composition of claim 93 that, when constituted with a liquid, produces a fluid composition further comprising a clouding agent from about 0 to about 100 parts per million.

112. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) from about 10 to about 20 mEq/L of chloride;

(d) at least about 8 mEq/L of potassium;

(e) from about 1 to about 6 mEq/L of calcium;

(f) from about 1 to about 6 mEq/L of magnesium;

(g) from about 0 to about 0.4% by weight of a flavoring agent;

(h) from about 0 to about 100 parts per million of a clouding agent; and

(i) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

113. The concentrate composition of claim 112 wherein said sodium comprises from about 30 to about 100 mEq/L.

114. The concentrate composition of claim 112 wherein said sodium comprises from about 30 to about 60 mEq/L.

115. The concentrate composition of claim 112 wherein said sodium comprises from about 33 to about 40 mEq/L.

116. The concentrate composition of claim 113 wherein said sodium comprises from about 10 to about 50 mEq/L of sodium chloride and from about 10 to about 50 mEq/L of sodium citrate.

117. The concentrate composition of claim 114 wherein said sodium comprises from about 10 to about 30 mEq/L of sodium chloride and from about 10 to about 30 mEq/L of sodium citrate.

118. The concentrate composition of claim 112 wherein said chloride comprises from about 11 to about 18 mEq/L.

119. The concentrate composition of claim 112 wherein said potassium comprises from about 8 to about 20 mEq/L.

120. The concentrate composition of claim 112 wherein said calcium comprises from about 1 to about 3 mEq/L.

121. The concentrate composition of claim 112 wherein said magnesium comprises from about 1 to about 3 mEq/L.

122. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4.5 to about 6.5% by weight of carbohydrates;

(b) from about 30 to about 40 mEq/L of sodium;

- (c) from about 10 to about 20 mEq/L of chloride;
- (d) from at about 8 to about 20 mEq/L of potassium;
- (e) from about 1 to about 3 mEq/L of calcium;
- (f) from about 1 to about 3 mEq/L of magnesium;
- (g) from about 0 to about 0.2% by weight of a flavoring agent;
- (h) from about 0 to about 50 parts per million of a clouding agent; and
- (i) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

123. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;
- (c) at least about 8 mEq/L of potassium; and
- (d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

124. The concentrate composition of claim 123 wherein said carbohydrate source is selected from sucrose, maltose, maltodextrin, glucose, galactose, trehalose, fructose,

fructo-oligosaccharides, beta-glucan, and trioses such as pyruvate and lactate and mixtures thereof.

125. The concentrate composition of claim 123 that, when constituted with a liquid, produces a fluid composition further comprising from about 1 to about 6 mEq/L of calcium.

126. The concentrate composition of claim 123 that, when constituted with a liquid, produces a fluid composition further comprising from about 1 to about 6 mEq/L of magnesium.

127. The concentrate composition of claim 123 that, when constituted with a liquid, produces a fluid composition further comprising:

(a) from about 0 to about 0.4% by weight of a flavoring agent; and

(b) from about 0 to about 100 parts per million of a clouding agent.

128. The concentrate composition of claim 127 that, when constituted with a liquid, produces a fluid composition further comprising from about 1 to about 6 mEq/L of calcium.

129. The concentrate composition of claim 128 that, when constituted with a liquid, produces a fluid composition further comprising from about 1 to about 6 mEq/L of magnesium.

130. The concentrate composition of claim 123 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

131. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment;

(c) at least about 8 mEq/L of potassium;

(d) from about 1 to about 6 mEq/L of calcium;

(e) from about 1 to about 6 mEq/L of magnesium;

(f) from about 0 to about 0.4% by weight of a flavoring agent;

(g) from about 0 to about 100 parts per million of a clouding agent; and

(h) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

132. The concentrate composition of claim 131 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

133. The concentrate composition of claim 131 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 42 to about 70 mEq/L.

134. The concentrate composition of claim 131 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 46 to about 60 mEq/L.

135. The concentrate composition of claim 131 wherein said potassium comprises from about 8 to about 20 mEq/L.

136. The concentrate composition of claim 131 wherein said calcium comprises from about 1 to about 3 mEq/L.

137. The concentrate composition of claim 131 wherein said magnesium comprises from about 1 to about 3 mEq/L.

138. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment;

(c) from about 8 to about 20 mEq/L of potassium;

(d) from about 1 to about 6 mEq/L of calcium;

(e) from about 1 to about 6 mEq/L of magnesium;

(f) from about 0 to about 0.4% by weight of a flavoring agent;

(g) from about 0 to about 100 parts per million of a clouding agent; and

(h) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

139. The concentrate composition of claim 138 wherein said ions which favor the filling of the extracellular fluid compartment comprise sodium and chloride ions.

140. The concentrate composition of claim 138 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 42 to about 70 mEq/L.

141. The concentrate composition of claim 138 wherein said ions which favor the filling of the extracellular fluid compartment comprises from about 46 to about 60 mEq/L.

142. The concentrate composition of claim 138 wherein said potassium comprises from about 10 to about 19 mEq/L.

143. The concentrate composition of claim 138 wherein said calcium comprises from about 1 to about 3 mEq/L.

144. The concentrate composition of claim 138 wherein said magnesium comprises from about 1 to about 3 mEq/L.

145. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

146. The concentrate composition of claim 145 wherein said sodium comprises up to about 100 mEq/L.

147. The concentrate composition of claim 145 wherein said sodium comprises up to about 60 mEq/L.

148. The concentrate composition of claim 145 wherein said sodium comprises from about 33 to about 40 mEq/L.

149. The concentrate composition of claim 145 wherein said chloride comprises from about 10 to about 50 mEq/L.

150. The concentrate composition of claim 145 wherein said chloride comprises from about 11 to about 20 mEq/L.

151. The concentrate composition of claim 145 wherein said potassium comprises from about 8 to about 16 mEq/L.

152. The concentrate composition of 145 that, when constituted with a liquid, produces a fluid composition further comprising calcium from about 0.1 to about 6 mEq/L.

153. The concentrate composition of 145 that, when constituted with a liquid, produces a fluid composition further comprising magnesium from about 0.1 to about 6 mEq/L.

154. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

(a) from about 4 to about 10% by weight of a carbohydrate source;

- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium;
- (e) at least about 0.1 to about 6 mEq/L of magnesium;
- (f) at least about 0.1 to about 6 mEq/L of calcium;
- (g) from about 0 to about 0.4% by weight of a flavoring;
- (h) from about 0 to about 100 ppm of a clouding agent;
- (i) from about 0.24 to about 0.45% by weight of citric acid; and
- (j) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

155. The concentrate composition of claim 154 wherein said sodium comprises up to about 100 mEq/L.

156. The concentrate composition of claim 154 wherein said sodium comprises up to about 60 mEq/L.

157. The concentrate composition of claim 154 wherein said sodium comprises from about 33 to about 40 mEq/L.

158. The concentrate composition of claim 154 wherein said chloride comprises from about 10 to about 50 mEq/L.

159. The concentrate composition of claim 154 wherein said chloride comprises from about 11 to about 20 mEq/L.

160. The concentrate composition of claim 154 wherein said potassium comprises from about 8 to about 16 mEq/L.

161. A concentrate composition that, when constituted with a liquid, produces a fluid composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 1.0 mEq/L of magnesium;
- (e) at least about 0.1 mEq/L of calcium; and
- (f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

162. The concentrate composition of claim 161 wherein said sodium comprises from about 30 to about 100 mEq/L.

163. The concentrate composition of claim 161 wherein said chloride comprises from about 10 to about 50 mEq/L.

164. The concentrate composition of claim 161 wherein said magnesium comprises from about 1 to about 6 mEq/L.

165. The concentrate composition of claim 161 wherein said calcium comprises from about 0.1 to about 6 mEq/L.

166. The concentrate composition of claim 161 that, when constituted with a liquid, produces a fluid composition further comprising at least 7 mEq/L of potassium.

167. The concentrate composition of claim 166 wherein said potassium comprises from about 7 to about 25 mEq/L.

168. The concentrate composition of claim 167 that, when constituted with a liquid, produces a fluid composition further comprising:

- (a) from about 0 to about 0.4% by weight of a flavoring;
- (b) from about 0 to about 100 ppm of a clouding agent; and
- (c) from about 0.24 to about 0.45% by weight citric acid.

169. A method of reducing the effects of dehydration, said method comprising administering before, during or after activity-induced fluid loss a fluid composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) from about 10 to about 20 mEq/L of chloride;
- (d) at least about 7 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said fluid composition is in the range of from about 250 to about 350 mOsm/Kg.

170. A method of reducing the effects of dehydration, said method comprising administering before, during or after activity-induced fluid loss a fluid composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;
- (c) at least about 8 mEq/L of potassium; and
- (d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

171. A method of reducing the effects of dehydration, said method comprising administering before, during or after activity-induced fluid loss a fluid composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

172. A method of reducing the effects of dehydration, said method comprising administering before, during or after activity-induced fluid loss a fluid composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 1.0 mEq/L of magnesium;
- (e) at least about 0.1 mEq/L of calcium; and
- (f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

173. A method of improving fluid retention, said method comprising administering a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) from about 10 to about 20 mEq/L of chloride;
- (d) at least about 7 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said composition is in the range of from about 250 to about 350 mOsm/Kg.

174. A method of improving fluid retention, said method comprising administering a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;
- (c) at least about 8 mEq/L of potassium; and
- (d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

175. A method of improving fluid retention, said method comprising administering a composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) greater than about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 3 to about less than 16 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

176. A method of improving fluid retention, said method comprising administering a composition comprising:

- (a) from about 4 to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) at least about 10 mEq/L of chloride;
- (d) at least about 1.0 mEq/L of magnesium;
- (e) at least about 0.1 mEq/L of calcium; and
- (f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

177. A method of abating urinary loss, said method comprising administering a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) from about 10 to about 20 mEq/L of chloride;
- (d) at least about 7 mEq/L of potassium; and
- (e) water;

wherein the osmolality of said composition is in the range of from about 250 to about 350 mOsm/Kg.

178. A method of abating urinary loss, said method comprising administering a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;

(b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;

(c) at least about 8 mEq/L of potassium; and

(d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

179. A method of abating urinary loss, said method comprising administering a composition comprising:

(a) from about 4 to about 10% by weight of a carbohydrate source;

(b) greater than about 30 mEq/L of sodium;

(c) at least about 10 mEq/L of chloride;

(d) at least about 3 to about less than 16 mEq/L of potassium; and

(e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

180. A method of abating urinary loss, said method comprising administering a composition comprising:

(a) from about 4 to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) at least about 10 mEq/L of chloride;

- (d) at least about 1.0 mEq/L of magnesium;
- (e) at least about 0.1 mEq/L of calcium; and
- (f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

181. A method of enhancing rehydration, improving fluid retention, and reducing urinary fluid loss, said method comprising administering orally or intravenously a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) at least about 30 mEq/L of sodium;
- (c) from about 10 to about 20 mEq/L of chloride; and
- (d) at least about 7 mEq/L of potassium.

182. A method of enhancing rehydration, improving fluid retention, and reducing urinary fluid loss, said method comprising administering orally or intravenously a composition comprising:

- (a) from about 4% to about 10% by weight of a carbohydrate source;
- (b) from about 40 to about 78 mEq/L of ions which favor the filling of the extracellular fluid compartment; and;
- (c) at least about 8 mEq/L of potassium; and

(d) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

183. A method of enhancing rehydration, improving fluid retention, and reducing urinary fluid loss, said method comprising administering orally or intravenously a composition comprising:

(a) from about 4 to about 10% by weight of a carbohydrate source;

(b) greater than about 30 mEq/L of sodium;

(c) at least about 10 mEq/L of chloride;

(d) at least about 3 to about less than 16 mEq/L of potassium; and

(e) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.

184. A method of enhancing rehydration, improving fluid retention, and reducing urinary fluid loss, said method comprising administering orally or intravenously a composition comprising:

(a) from about 4 to about 10% by weight of a carbohydrate source;

(b) at least about 30 mEq/L of sodium;

(c) at least about 10 mEq/L of chloride;

(d) at least about 1.0 mEq/L of magnesium;

(e) at least about 0.1 mEq/L of calcium; and

(f) water;

wherein the osmolality of said beverage is in the range of from about 250 to about 350 mOsm/Kg.